

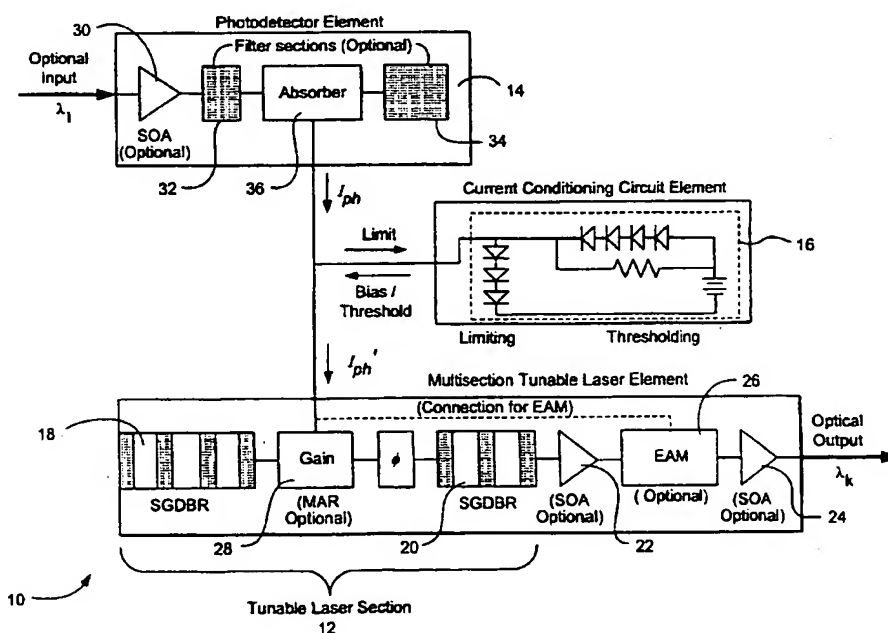
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- [Continued on next page]

(54) Title: INTEGRATED OPTO-ELECTRONIC WAVELENGTH CONVERTER ASSEMBLY



(57) Abstract: A wavelength converter assembly includes a substrate. An epitaxial structure is formed on the substrate with areas of different optical properties. A laser and a photodetector are formed in the epitaxial structure. The photodetector generates a first electrical signal in response to an optical signal. A conditioning circuit is coupled to the laser and the photodetector. The conditioning circuit receives the first electrical signal and provides a second electrical signal to the laser to modulate its optical output.

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International Application No.

PCT/US 00/22831

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H01S5/026

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BAR-CHAIM N ET AL: "MONOLITHIC OPTOELECTRONIC INTEGRATION OF A GAALAS LASER, A FIELD EFFECT TRANSISTOR AND A PHOTODIODE" APPLIED PHYSICS LETTERS, US, AMERICAN INSTITUTE OF PHYSICS, NEW YORK, vol. 44, no. 10, 15 May 1984 (1984-05-15), pages 941-943, XP002016763 ISSN: 0003-6951 page 941, column 2, line 10 -page 942, column 2, line 2; figures 1,2 ---	1-4, 38-40, 68-70, 86-88, 104, 146
X	US 5 742 045 A (KIMMET JAMES S ET AL) 21 April 1998 (1998-04-21) ---	1-4, 38, 86-88, 104, 109
A	column 3, line 18 -column 4, line 5; figure 1 --- -/--	68, 146



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the international search

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5 625 636 A (JEWELL JACK L ET AL) 29 April 1997 (1997-04-29) column 8, line 17 -column 9, line 44; figures 4,7 ---	1,38,86, 104 68,146
X	US 5 674 778 A (LEE KWYRO ET AL) 7 October 1997 (1997-10-07)  column 2, line 36 -column 5, line 7; figure 1 ---	1,38,68, 86,104, 146
A	BYOUNG-SUNG KIM ET AL: "Dynamic analysis of widely tunable laser diodes integrated with sampled- and chirped-grating distributed Bragg reflectors and an electroabsorption modulator" IEICE TRANSACTIONS ON ELECTRONICS, AUG. 1998, INST. ELECTRON. INF. & COMMUN. ENG, JAPAN, vol. E81-C, no. 8, pages 1342-1349, XP000848540 ISSN: 0916-8524 paragraph '0003!; figure 1 -----	1,38,68, 86,104, 146

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Information on patent family members

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